STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.	MO-0131041
Owner:	PSM Farms
Address:	1801 W. Austin, Suite F, Nevada, MO 64772
Continuing Authority:	Same as above
Address:	Same as above
Operation Name:	Murphy Family Ventures, Doylesport Pyramid
Operation Address:	Nevada, MO 64772
Legal Description:	See Facility Description
Latitude/Longitude:	See Facility Description
Receiving Stream:	Hyder Branch
First Classified Stream and ID:	See Operation Description
USGS Basin & Sub-watershed No.:	See Operation Description

is authorized to discharge from the operation described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

Water quality standards do not have to be exceeded to determine the unauthorized discharge of processed waste as defined in special condition 2(b). Operation of this site shall not cause a violation of water quality standards. Land application fields include all company owned land where land application occurs and all non-company owned land where spreading agreements allow land application. These provisions apply to all the company's regulated activities.

FACILITY DESCRIPTION

Outfalls #001 - #010 – Concentrated Animal Feeding Operation - SIC #0213
No Discharge of Process Waste. Class 1B.
Six single cell anaerobic lagoons/secondary containment structures/land application of process waste/storm water runoff/dead animal refrigeration units/domestic wastewater septic tanks to lagoons.
Design population equivalent is 49,308.
Design flow is 24,202,055 gallons per year. (0.067 mgd)
Design number of animals is 1,200 sows & litters; 7,326 gestation sows; (3,410 animal units).
This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

August 19, 2005
Effective Date

Doyle Childers, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

August 18, 2010
Expiration Date

Edward Galbraith, Director of Staff, Clean Water Commission

MO 780-0041 (10-93)

FACILITY DESCRIPTION (continued)

Total Number of Acres Available for Land Application:

Percent Slope	Land Owned by Permittee	Non-owned Land with Spreading Agreement Acres	Total
0-10%	1,026.6		1,026.6
10-20%			
TOTAL	1,026.6		1,026.6

Outfall 001 – Wheat Run East Lagoon - One anaerobic lagoon/secondary containment/storm water runoff/domestic wastewater/land application of process waste.
Legal Description: SW ¼, SE ¼, Sec.14, T33N, R30W, Barton County.
Latitude/Longitude: +3736104/-09411330
First Classified Stream and ID: Horse Creek (C) (01351)
USGS Basin & Sub-watershed No.: (10290106-090003)
Design Number of Animals: 400 sows & litters. 1242 gestation sows.
Design Population Equivalent: 9,686.
Design Waste Volume: 5,139,565 gallons/year.
Design Storage: 145 days.
Upper Operating Level: 1 foot below overflow level.
Lower Operating Level: 3.5 feet below overflow level.
Land Application: Rates are based on plant available nitrogen (PAN) approach.

Outfall #002 – Wheat Run West Lagoon - One anaerobic lagoon/secondary containment/storm water runoff/domestic wastewater/land application of process waste.
Legal Description: SW ¼, SE ¼, Sec. 14, T33N, R30W, Barton County
Latitude/Longitude: +3736105/-09411376
First Classified Stream and ID: Horse Creek (C) (01351)
USGS Basin & Sub-watershed No.: (10290106-090003)
Design Number of Animals: 1,200 gestation sows
Design Population Equivalent: 6,750.
Design Waste Volume: 2,838,240 gallons/year.
Design Storage: 218 days.
Upper Operating Level: 1 foot below overflow level.
Lower Operating Level: 4.5 feet below overflow level.
Land Application: Rates are based on plant available nitrogen (PAN) approach.

Outfall #003 – Eagles Nest East Lagoon - One anaerobic lagoon/secondary containment/storm water runoff/domestic wastewater/land application of process waste.
Legal Description: SE ¼, SW ¼, Sec. 23, T33N, R30W, Barton County
Latitude/Longitude: +3735173/-09411434
First Classified Stream and ID: Horse Creek (C) (01351)
USGS Basin & Sub-watershed No.: (10290106-090003)
Design Number of Animals: 400 sows & litters. 1242 gestation sows.
Design Population Equivalent: 9,686.
Design Waste Volume: 5,097,225 gallons/year.
Design Storage: 144 days.
Upper Operating Level: 1 foot below overflow level.
Lower Operating Level: 3.5 feet below overflow level.
Land Application: Rates are based on plant available nitrogen (PAN) approach

FACILITY DESCRIPTION (continued)

Outfall #004 – Eagles Nest West Lagoon - One anaerobic lagoon/secondary containment/storm water runoff/domestic wastewater/land application of process waste.
Legal Description: SE ¼, SW ¼, Sec. 23, T33N, R30W, Barton County
Latitude/Longitude: +3735179/-09411467
First Classified Stream and ID: Horse Creek (C) (01351)
USGS Basin & Sub-watershed No.: (10290106-090003)
Design Number of Animals: 1,200 gestation sows.
Design Population Equivalent: 6,750.
Design Waste Volume: 2,807,215 gallons/year.
Design Storage: 217 days.
Upper Operating Level: 1 foot below overflow level.
Lower Operating Level: 4.5 feet below overflow level.
Land Application: Rates are based on plant available nitrogen (PAN) approach

Outfall #005 – Quail Ridge North Lagoon - One anaerobic lagoon/secondary containment/storm water runoff/domestic wastewater/land application of process waste.
Legal Description: SW ¼, NE ¼, Sec. 23, T33N, R30W, Barton County
Latitude/Longitude: +3735435/-09411362
First Classified Stream and ID: Horse Creek (C) (01351)
USGS Basin & Sub-watershed No.: (10290106-090003)
Design Number of Animals: 1,200 gestation sows.
Design Population Equivalent: 6,750.
Design Waste Volume: 2,953,580 gallons/year.
Design Storage: 206 days.
Upper Operating Level: 1 foot below overflow level.
Lower Operating Level: 4.5 feet below overflow level.
Land Application: Rates are based on plant available nitrogen (PAN) approach

Outfall #006 – Quail Ridge South Lagoon - One anaerobic lagoon/secondary containment/storm water runoff/domestic wastewater/land application of process waste.
Legal Description: SW ¼, NE ¼, Sec. 23, T33N, R30W, Barton County
Latitude/Longitude: +3735443/-09411383
First Classified Stream and ID: Horse Creek (C) (01351)
USGS Basin & Sub-watershed No.: (10290106-090003)
Design Number of Animals: 400 sows & litters. 1242 gestation sows.
Design Population Equivalent: 9,686.
Design Waste Volume: 5,366,230 gallons/year.
Design Storage: 136 days.
Upper Operating Level: 1 foot below overflow level.
Lower Operating Level: 3.5 feet below overflow level.
Land Application: Rates are based on plant available nitrogen (PAN) approach

Outfall #007 – Dead Animal Transfer Station – SIC #4953
No Discharge refrigeration unit for temporary storage of dead animals until collection and tranfer to off-site rendering or disposal facility.

Outfall #008 – Storm Water
Legal Description: SE ¼, NE ¼, SE ¼, Sec. 23, T33N, R30W, Barton County
Lat/Long: +3735274/-09411041
First Classified Stream and ID: Horse Creek (C) 01351
USGS Basin & sub-watershed No: 10290106-090003
Unnamed Tributary to Hyder Branch at property line.

FACILITY DESCRIPTION (continued)

Outfall #009 – Stream Monitoring
Legal Description: NE, Sec. 10, T32N, R29W, Barton County
Lat/Long: +3732069/-09405428
First Classified Stream and ID: Horse Creek (C) 01351
USGS Basin & sub-watershed No: 10290106-090001
Horse Creek at Highway F.

Outfall #010 – Stream Monitoring
Legal Description: NW, Sec. 9, T32N, R30W, Barton County
Lat/Long: +3732275/-09414266
First Classified Stream and ID: North Fork Spring River (C) 03188
USGS Basin & sub-watershed No: 11070207-060004
Elm Branch at road crossing.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	MONITORING REQUIREMENTS		
		REQUIREMENTS	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfalls #001 - #006 - Emergency Discharge Monitoring				
Flow	MGD	No discharge of process waste except during emergency conditions.	once/day during discharge	24 hr. estimate
Dissolved Oxygen	mg/L	Comply with Water Quality Standards	once/day during discharge	grab
Ammonia Nitrogen as N	mg/L	See Special Condition Numbers 1, 2, 3, 8, 9 & 10.	once/day during discharge	grab
BOD	mg/L		once/day during discharge	grab
pH – Units	SU		once/day during discharge	grab
Temperature	^{O}C		once/day during discharge	grab
Chloride	mg/L		once/day during discharge	grab
Outfalls #001 - #006 - Nutrient Monitoring For Land Application				
Total Kjeldahl Nitrogen as N	mg/L	See Special Condition Numbers 4, 8 & 10.	4/year	composite
Ammonia Nitrogen as N	mg/L	Sample liquids 4 times/year between March 1 and November 30 and 1/year for nitrate.	4/year	composite
Total Phosphorus as P	mg/L		4/year	composite
Nitrate + Nitrite as N	mg/L		1/year	composite
Solids (Sludge Only)	%	Sample solids or sludges 1/month during land application periods.	Sample sludges for all parameters for each month sludge land application occurs.	
Outfalls #001 - #006 - Land Application Operational Monitoring				
Lagoon or Storage Structure Freeboard	feet	See Special Condition Numbers 5, 10 and 17 through 25.	once/month	measured
Land Application	hours		daily	total
Amount Land Applied	gallons or cubic feet		daily	total
Application Area	acres		daily	total
Application Rate	inches/ acre inches		daily	total
Rainfall			daily	total

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY THE FIRST REPORT IS DUE _____ THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Part I STANDARD CONDITIONS DATED October 1, 1980, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	MONITORING REQUIREMENTS		
		REQUIREMENTS	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfalls #009, 010 - Stream Monitoring				
Flow	MGD	Samples shall be collected during the same week on a pre-determined sampling date on a monthly basis so sampling dates are unbiased by flow condition. Samples shall be only collected from flowing water. Samples from riffles are preferred. Do not collect a sample from pools that do not have water flowing into or out of the pool. See Special Condition Number 10.	1/month	24 hr. estimate
pH - Units	SU		1/month	grab
Ammonia Nitrogen as N	mg/L		1/month	grab
Nitrate + Nitrite as N	mg/L		1/month	grab
Total Phosphorus as P	mg/L		1/month	grab
Temperature	. °C		1/month	grab
Total Suspended Solids	mg/L		1/month	grab
Dissolved Oxygen	mg/L		April through November between 1 hour before to 3 hours after sunrise	grab
Outfall #008 - Storm Water Runoff Monitoring				
pH – Units	SU	See Special Condition Numbers 1, 2, 6, 8 & 10. Sample 4 times per year at two or three month intervals between March 1 and November 30.	4/year	grab
Ammonia Nitrogen as N	mg/L		4/year	grab
Nitrate + Nitrite as N	mg/L		4/year	grab
Total Phosphorus as P	mg/L		4/year	grab
Chloride	mg/L		4/year	grab
Temperature	°C		4/year	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE _____ . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

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A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	MONITORING REQUIREMENTS		
		REQUIREMENTS	MEASUREMENT FREQUENCY	SAMPLE TYPE
All Application Fields - Storm Water Monitoring within 24 hours after land application				
Ammonia Nitrogen as N	mg/L	See requirements below. See Special Condition Numbers 1, 2, 8 and 10.	See sample collection frequency requirements below in paragraph d & e.	grab
Nitrate + Nitrite as N	mg/L			grab
Chloride	mg/L			grab
Total Phosphorus as P	mg/L			grab
Temperature	^{o}C			grab
pH – Units	SU			grab
Date of Runoff				
Field Number				
Crop				
Application Equipment				
Application Rate				

a. This is a monitoring only requirement.
b. This monitoring procedure will be used to evaluate the rainfall runoff from fields that have received rainfall within 24 hours after land application of process waste.
c. Samples shall be collected from one location that has rainfall runoff at the field boundary. If no flow at field boundary, sample shall be collected at the closest downgradient location where the flow will allow sample collection.
d. Samples shall be collected within the first sixty (60) minutes after the start of the runoff, or as soon as possible. Sampling is only required to be conducted during daylight hours. Permittee will address specific sampling procedures in Operation and Maintenance (O & M) Manual.
e. One sample shall be collected from each field (maximum of two fields per rainfall event) that has rainfall runoff within 24 hours of land application for the first six (6) rainfall events during each of the following time periods: (March, April, May) – (June, July, August) – (September, October, November).
f. One control sample shall be collected per quarter from a location that has not received rainfall within 24 hours after land application of process waste. The control sample may be collected (1) during the same rainfall event from a field with the same crop or (2) from the location where the 24-hour sample was collected but during a subsequent rainfall event that has not occurred within 24 hours after land application of process waste.

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE_____. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

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A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	MONITORING REQUIREMENTS		
		REQUIREMENTS	MEASUREMENT FREQUENCY	SAMPLE TYPE
All Outfalls and Land Application Fields- Monitoring of Unauthorized Discharges to Waters of the State				
Flow	MGD	No discharge of process waste. Water Quality Standards do not have to be exceeded to determine process waste being discharged. An unauthorized discharge is a permit violation in itself. See Special Condition Numbers 1, 2, 3, 8, 9 and 10.	once/day during discharge	24 hr. estimate
Dissolved Oxygen	mg/L		once/day during discharge	grab
Ammonia Nitrogen as N	mg/L		once/day during discharge	grab
pH – Units	SU		once/day during discharge	grab
Temperature	°C		once/day during discharge	grab
BOD	mg/L		once/day during discharge	grab
Total Suspended Solids	mg/L		once/day during discharge	grab
Chloride	mg/L		once/day during discharge	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY THE FIRST REPORT IS DUE
THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Part I STANDARD CONDITIONS DATED October 1, 1980, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	MONITORING REQUIREMENTS			
		DISCHARGE MAXIMUM	REQUIREMENTS	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfalls #001-006 - Secondary Containment Monitoring					
Process waste in excess of 1000 gallons that enters secondary containment	Gallons		See Requirements below. See Special Condition Numbers 1, 2, 8, 10 and 26.	Each incident	
Ammonia Nitrogen as N	mg/L	2.5		each release	grab

a. There shall be no discharge of process wastewater from secondary containment structures. The procedure listed below shall be used to determine when there is no process wastewater in the containment structure and the containment water may be released. Gallons of process waste removed from secondary containment structures and testing of each release of water shall be recorded and reported to the department. Any releases from secondary containment shall not cause a violation of the water quality standards.

b. Any wastewater spills or leaks collected in the containment structures shall be pumped into the lagoon or directly land applied so that there is no discharge of process waste.
Before release of water from the containment structures the water shall be tested for ammonia. Storm water may be released from the containment structure when the ammonia-N content is less than 2.5 mg/L. Storm water that exceeds these limits shall be pumped into the lagoon or land applied so that there is no runoff.

c. In field testing for ammonia nitrogen using colorimetric testing or other approved testing methods may be used for sampling of containment structures.

d. Testing and release procedures will be described in the O & M Manual.

e. Testing results on water released from the containment structures shall be submitted Quarterly.

f. Storm water runoff that does not come in contact with wastewater leaks, spills or over application of land applied wastes is not considered process wastewater under 10 CSR 20-6.300.

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY THE FIRST REPORT IS DUE _____. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Part I STANDARD CONDITIONS DATED October 1, 1980, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	MONITORING REQUIREMENTS			
	UNITS	REQUIREMENTS	MEASUREMENT FREQUENCY	SAMPLE TYPE
All Land Application Fields - Soil Monitoring				
Nitrate Nitrogen as N	mg/kg	See Special Condition Numbers 7, 10 and 22.	1/year In Spring prior to Planting Season	Composite
Soil pH	SU		1/3 Years	Composite
Percent Organic Matter	%		1/3 Years	Composite
Cation Exchange Capacity	SU		1/3 Years	Composite
Potassium as K	mg/kg		1/3 Years	Composite
Available Phosphorus as P (Bray P-1 test method)	mg/kg		1/3 Years	Composite

MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY ; THE FIRST REPORT IS DUE _____ . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

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C. SPECIAL CONDITIONS:

1. Water Quality Standards

a. Operation of this site shall not cause a violation of water quality standards rule under 10 CSR 20-7.031.

b. General Criteria
The following water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
(1) Waters shall be free from substances in sufficient amounts to cause the formation or putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
(2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
(3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
(4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal, or aquatic life;
(5) There shall be no significant human health hazard from incidental contact with the water;
(6) There shall be no acute toxicity to livestock or wildlife watering;
(7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
(8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such material is specifically permitted pursuant to section 260.200-260.247.

C. SPECIAL CONDITIONS (continued)

2. No-Discharge Requirement: No Discharge except during emergency conditions

a. The permittee shall land apply wastewater on suitable days as needed to keep the storage structure within design operating levels. The storage shall be maintained as near to the lower operating level (maximum storage capacity) as practicable so as to provide capacity for process wastewater flows plus the 1-in-10-year chronic rainfall and the 25-year, 24-hour rainfall based on the design storage period listed in the operation description. There shall be no-discharge of process waste during dry weather conditions when soils are suitable for irrigation. If wastewater has been properly land applied on suitable days during the last 12 months, emergency discharge is allowed by overflow through the emergency spillway of the storage structure due to storm events exceeding the chronic or catastrophic storm events for the design storage period, but discharge shall cease as soon as land application is feasible. Process waste discharge is not allowed by pumping, siphoning, cutting of berms, irrigation runoff, or any other method, except as authorized herein. Permittee shall make every reasonable effort to cease discharge as soon as soil conditions are suitable for irrigation.

b. Definition: Process Waste
Process waste as defined in 10 CSR 20-6.300 includes manure, wastewater and any precipitation which comes into contact with any manure, litter or bedding or any other raw material or intermediate or final material or product used in the production of animals or direct products. It includes spillage or overflow from animal watering systems; washing, cleaning or flushing of pens, barns, manure pits or other associated animal operations; washing or spray cooling of animals; dust control; storm water runoff from animal confinement areas and loading and unloading areas; storm water runoff from deposits of airborne dust from building ventilation systems or spillage of feed or manure; discharges from land application fields that occur during land application; and storm water runoff from land application fields if wastes are applied during frozen, snow covered or saturated soil conditions or if application rates exceed the maximum nitrogen utilization of the vegetation grown.

3. Monitoring of Emergency Discharge or Unauthorized Discharge

a. Any emergency wastewater discharge or unauthorized discharge of process wastewater that occurs shall be monitored once/day for flow, Ammonia Nitrogen as N, Dissolved Oxygen, BOD, Chloride, pH and Temperature. Unauthorized discharges shall also be monitored for Total Suspended Solids.

b. Samples shall be collected of the discharge at the down gradient property boundary. Samples shall also be collected from the receiving waters above and below the discharge point. If the receiving drainage is dry above the discharge point, report as no stream flow above the discharge point.

c. Records shall be maintained for time, date, location, and duration of the discharge and an estimate of the discharge volume.

d. Notify the department as soon as possible and no later than within 24 hours of any discharge that occurs and submit monitoring results within 30 days.

4. Nutrient Monitoring for Land Application (Outfalls #001-006 See Section A Page 5)

a. Wastewater from each lagoon shall be sampled and tested at least 4 times/year at regular intervals between March 1 and November 30. Samples shall be tested for Total Kjeldahl Nitrogen (TKN) as N, Ammonia Nitrogen as N, and Total Phosphorus as P. Samples shall also be tested at least once/year for Nitrate + Nitrite Nitrogen from each lagoon. Each sample shall be a composite sample consisting of at least seven (7) grab samples. Samples should be collected from the lagoon, irrigation pump or wet well, irrigation equipment, recycle pump, or flush tank. The samples shall be taken so as to represent variations in wastewater concentrations within the lagoon lower and upper pump-down levels. Samples collected directly from the lagoon shall be taken from two to five feet below the lagoon water surface, at least fifteen feet from the waters edge and at least seven different locations spaced about equally around the perimeter of the lagoon. If the lagoon will be agitated before pumping, the samples must be taken during agitation. When sampling at the recycle pump, the seven grab samples shall be taken at two – three minute intervals or longer. For sampling flush tanks, one or more grab samples shall be taken from each tank.

C. SPECIAL CONDITIONS (continued)

4. Nutrient Monitoring for Land Application (continued)
   b. Solids or sludges shall be sampled and tested separately. At least one composite sample shall be collected for each month when land application occurs. Each composite sample shall consist of at least 20 grab samples. Solids and sludges shall be tested for Total Kjeldahl Nitrogen as N, Ammonia Nitrogen as N, Total Phosphorus as P, and percent solids.

5. Land Application Operational Monitoring (Outfalls #001-006 See Section A Page 5)
   a. The inches of precipitation received at the production site shall be recorded daily and shall be reported quarterly for daily amounts, monthly totals, and cumulative total.
   b. Daily records shall be kept on file by each field for land application locations, volumes, acres, inches/acre, time of applications, and which lagoon was being pumped. These shall be summarized in the quarterly and annual reports. Daily totals shall be kept on file by permittee and cumulative amounts submitted quarterly and in the annual report.
   c. Monthly measurements shall be made of the water level in each lagoon and shall be recorded as feet below the emergency overflow elevation. Report quarterly.
   d. Nitrogen application rates, crop yields, crop nitrogen requirements, and other operational monitoring shall be recorded for each field and reported in the annual report.

6. Storm Water Runoff Monitoring (Outfall #008 See Section A Page 6)
   a. Samples required in this paragraph shall be collected at the storm water monitoring locations listed in Section A of this permit.
   b. Storm water runoff shall be monitored 4 times/year for Ammonia Nitrogen as N, Nitrate + Nitrite Nitrogen as N, total phosphorus as P, chloride, pH, and temperature.
   c. Samples shall be collected during storm water runoff events that occur after rainfalls of at least 0.5 inch within a 24-hour period. Collect the sample as soon as practicable after the beginning of storm water runoff.
   d. If there are no runoff events during a monitoring period, report as no discharge of storm water.

7. Soil Monitoring
   a. Composite soil samples shall be collected from fields where land application will occur within the next 12 months.
   b. Nitrate nitrogen as N shall be tested once per year. Soil samples may be collected for the top 0-6 or 0-12 inches or more.
   c. Soil pH, percent organic matter, cation exchange capacity, Potassium as K, and available Phosphorus as P (Bray P-1 test method) shall be sampled prior to land application and once every three (3) years thereafter, unless no additional land application has occurred at the site.
   d. Soil sampling shall be in accordance with University of Missouri (MU) publication G9110, “Sampling Your Soil For Testing” or other methods approved by the department.
   e. Soil testing methods shall be in accordance with North Dakota Agricultural Experiment Bulletin 499-Revised, “Recommended Chemical Soil Test Procedures for the North Central Region” or other test methods approved by the department.
   f. The annual report shall include a summary of the soil test results for each field.

8. Sample Collection, Preservation and Testing Methods
   In field testing methods or other approved methods may be used for secondary containment monitoring. Other testing shall be in accordance with the most current version of Standard Methods for the Examination of Waters and Wastewaters or other approved methods listed in 10 CSR 20-7.015(9)(A).

C. SPECIAL CONDITIONS (continued)

9. Required Notification of Releases
   a. Any wastewater discharge into waters of the state shall be reported to the Department as soon as possible and no later than 24 hours after the start of the discharge.
   b. Spills or leaks that are contained on the property shall also be reported to the Department within 24 hours, if the spill or leak exceeds 1,000 gallons per day. This includes leaks from sewer lines, recycle lines, flushing systems, lagoons or irrigation systems.

10. Annual Report
An annual report is required in addition to the quarterly reporting under Section A of this permit. The annual report shall be submitted by January 28 of each year for the previous growing season from October 1 through September 30 or an alternate 12 month period approved by the Department and listed in the O & M Manual. This report shall be submitted using report forms approved by the Department and shall include a summary of the monitoring and record keeping required by the Special Conditions and Standard Conditions of this permit.

11. Operation Description
   a. This permit authorizes operation of the complete manure management system as described in the permit Operation Description, construction and operating permit applications, and O & M Manual. This includes manure and wastewater production, collection, storage, secondary containment, pumping equipment, pipelines, land application equipment, land application sites and any other features necessary to make the system complete and useable.
   b. The system listed in the operation description of this permit shall not be placed into operation until submittal of the engineering certification of completed construction and approval by the department.

12. Design Parameters
The design parameters listed below are operational guidelines to predict nutrient generation. Any proposed increases must be reported in accordance with Standard Conditions Part I, Section B, Paragraph 1., and may require a permit modification prior to the proposed change.
   a. Design Population Equivalent: The Design Population Equivalent is the human equivalent based on the annual average daily pounds of animals at the design capacity listed in the permit application. The average daily pounds of animals multiplied by a standard conversion factor equals the Design (human) Population Equivalent. The conversion factors are: 0.015 swine, 0.014 beef; 0.020 dairy; 0.030 laying hen; 0.040 turkey; and 0.05 poultry broiler.
   b. Design Flow: The design flow is based on the maximum annual flows including storm water flows during the one-in-ten year return frequency for annual or 365-day rainfall minus evaporation. The design flow is based on the time period when the flows are generated at the production site and not when flows are land applied. Portions of the design flow may be stored and carried over into the following year for land application, as necessary. Permittee may exceed the design flow when precipitation in any 365-day period exceeds the one-in-ten year annual precipitation amount.
   c. Animal Units: Animal Units are based on the maximum number and weight classification of animals in the permit application. As an operational guideline, the design number of animal units are calculated by averaging the weekly inventory number on a rolling 12 month average.
   d. Lagoon Levels: As an operational guideline, the lagoon levels should be maintained between the lower and upper operating levels during normal operations. If the upper operating level is exceeded, the operation shall take all reasonable measures to lower the lagoon level as soon as reasonably practicable. Within seven (7) days of the date that a lagoon's level exceeds the upper operating level, the permittee shall mail a report to the department that identifies the lagoon(s), the lagoon level in inches below the emergency spillway and actions taken to reduce the lagoon levels.
   e. Reporting Requirements: The actual operation numbers compared to the permitted design parameters shall be summarized in the annual report.

13. Construction Permits
All wastewater systems shall be constructed in accordance with a construction permit except where exempted by state regulations under 10 CSR 20-6.300.

C. SPECIAL CONDITIONS (continued)

14. Emergency Spillways
All lagoons shall have emergency spillways maintained as shown on the approved construction plans or approved as-built specifications.

15. House Bill 1207
Permittee shall maintain compliance with all applicable provisions of state law under 640.725 to 640.735 RSMo, Supp. 1996 (HB1207).

16. Reopener Clause
    a. This permit may be reopened and modified or alternatively revoked and reissued, to incorporate new or modified limitations or other conditions pertaining to phosphorus application rates to soils or by any other means or other special conditions as may be necessary to protect waters of the state.
    b. Comprehensive Nutrient Management Plan.
    The permit may be modified or reopened to require submittal of a Comprehensive Nutrient Management Plan (CNMP) where determined appropriate by the department to meet water quality standards for nutrients. This determination may be based upon ambient water quality monitoring, Section A monitoring requirements and other applicable information.
    c. This permit may be reopened and modified or alternatively revoked and reissued to incorporate new or modified effluent limitations required by changes to EPA CAFO regulations, or other conditions if, as the result of a watershed analyses, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the states water quality standards.

17. Land Application Site Locations
The permittee shall land apply wastewater only to suitable sites located within the overall property boundaries and descriptions listed in the permit application and associated operation plans. Permittee requests for additional sites including non-owned property must follow permit modification procedures prior to land application.

18. Separation Distances for Land Application Sites
Separation distances (buffer zones) shall be maintained between the land application site and other features as follows:
    a. Surface Application.
        (1) 300 feet from any losing stream, open sinkholes, water supply wells, or water supply reservoirs;
        (2) 100 feet from classified gaining streams for Class P and Class C streams listed in 10 CSR 20-7.031); unclassified gaining streams with water, and
        (3) 50 feet from, public roads, public use areas, unclassified gaining streams without water, or property boundaries unless application is by traveling gun. If application is by traveling gun, the set back distance shall be 100 feet.
        (4) Separation distances shall be increased to 150 feet or greater from residences that are not a part of the operation or land application area.
    b. Subsurface Injection.
        (1) 300 feet from any losing stream, open sinkholes, water supply wells, or water supply reservoirs;
        (2) 50 feet from classified gaining streams (Class P and C streams listed in 10 CSR 20-7.031); and
        (3) 25 feet from unclassified gaining streams, public roads, or property boundaries.
    c. Implementation procedures for these limitations shall be detailed in the O & M Manual.

19. Land Application Limitations
    a. Process wastes should be land applied as close as practicable to when plants will utilize nutrients. Fall application for the spring crop season may be used where appropriate, but should not be the primary application period. Land application of process wastes shall be utilized as a nutrient resource.
    b. Process wastes shall not be land applied during frozen, snow covered or saturated soil conditions.

C. SPECIAL CONDITIONS (continued)

19. Land Application Limitations (continued)
    c. Avoid application when there is a local, applicable weather forecast or observation by permittee of an imminent or impending storm event. Land application shall cease as soon as practicable upon occurrence of any precipitation.
    d. Land application equipment shall be operated in such a manner that wastes do not reach an adjoining property line, public use area or into waters of the state. Rigorous inspection procedures shall be implemented and documented for insuring that no visual spray drifts across public roads or property boundaries or into waters of the state. If the employee detects wind blown mist within 50 feet of an adjoining property line or public use area or waters of the state the application equipment shall be either moved farther away or shut down.
    e. Land application shall cease as soon as practicable upon occurrence of winds that cause spray drift across property boundaries, into public use areas, or into waters of the state.
    f. All application sites shall use soil conservation practices that meet Soil Conservation Standards of the USDA, Natural Resources Conservation Service (NRCS).
    g. Spray irrigation systems (travelling guns, center pivot, fixed spray nozzles, etc) shall have automatic shut-off devices at the pump in the case of pressure loss.
    h. Aboveground irrigation pipelines and equipment shall be checked at least once per hour to insure wastewater is contained within the system. The perimeter of the application fields shall be monitored continuously to insure that applied wastewater does not run off the fields where applied. Sections of underground irrigation lines not in use shall be checked after startup each day to verify no pressure is in the lines not being used. Underground lines in use or pressurized shall be checked immediately after start up and twice per day thereafter to insure wastewater is contained within the system.
    i. Land application rate shall be calculated during start up of spray irrigation equipment each day of operation by confirming operational parameters such as pressure, nozzle size, speed and other parameters. Calibration of traveling gun irrigation systems shall be verified at least once/month using rain gauges or collection pans within the spray pattern of the equipment to determine application rates in acre inch per application pass.
    j. Permittee shall maintain a daily record of days that are suitable for land application based on soil moisture records, checkbook methods or other methods approved by the department. Suitable days will include soil moisture capacity of less than 75% saturation capacity or other days when application can be performed without creating puddles of wastewater on the soil surface or runoff of applied wastewater. Suitable days by the checkbook method shall include any series of four days or more when there is no significant rainfall, and net evapotranspiration above rainfall exceeds 1.0 inch. When average daily temperatures are above 45 degrees, the typical evapotranspiration rate is 0.2 – 0.5 inches per day.
    k. Implementation procedures for these limitations shall be detailed in the O & M Manual.

20. Hydraulic Application Rates and Field Slopes
    a. Hydraulic application rates in acre inches/application pass and acre inches/day shall not exceed the soil infiltration capacity and soil moisture holding capacity (saturation capacity) of the soil. In no case shall the application result in the runoff of applied waste during or immediately following application.
    b. Slopes exceeding 20 percent (20%) shall not be used for land application.
    c. For field slopes less than ten percent (0-10%), surface application rates shall not exceed 0.5 acre inches/application pass and 1.0 acre inch/day depending on soil condition, except for short periods when initial soil moisture is significantly below field capacity in accordance with 10 CSR 20-8.020(15)(F)6.
    d. For field slopes between ten and 20 percent (10-20%), surface application rates shall be reduced to ½ the rate for slopes less than 10%. Permittee may land apply wastewater on these field slopes only after submitting a revised O&M Manual for achieving the above application rates and receiving prior approval from the department. Permittee shall maintain a topographic map showing slopes and drainage patterns at the operation. The number of acres approved for various slope conditions are listed in the operation/operation description section of this permit.
    e. For subsurface injection, application rates shall be based on soil absorption capacity during land application so that there are no puddles of wastewater on the soil surface. In no case shall the application rate exceed 1.0 inches/day (27,154 gallons/acre). The subsurface application rate and procedures for adjusting the rate to match soil moisture and field slope conditions shall be listed in the approved O & M Manual.

C. SPECIAL CONDITIONS (continued)

21. Land Application Equipment
    a. Subsurface injection should be considered where feasible and practicable to reduce exposure to wash off by storm water runoff and to retain nutrients in the soil for crop requirements. Surface application may be used when practical.
    b. Permittee shall own or have signed contracts with a commercial applicator to have adequate land application equipment readily available with capacity to apply 120% of the annual process wastewater flows (liquids, sludges and solids) within 85 ten hour days over the number of acres required for nutrient utilization.
    c. Implementation procedures for these limitations shall be detailed in the O & M Manual.

22. Nutrient Management
    a. Nitrogen. The permittee shall not exceed the plant available nitrogen management approach as listed in this permit.
    b. Phosphorus. Application rates shall not increase soil P levels above 120 pounds per acre soil test P using Bray P-1 test method. When soil test P is at or above 120 pounds per acre, the nutrient application rate shall not exceed the annual crop uptake levels of phosphorus. When State NRCS standards and guidelines become available, the permit will be revised by replacing the 120 pound limitation with any method under development by the Missouri NRCS under the USDA's, NRCS National Policy, General Manual, Title 190, Part 402.06.
    c. The actual application rates for a given year or growing season must be adjusted based on the approved management approach and the actual wastewater and soil testing results and crop requirement. If crop yields are less than that predicted averaged over the past three years, the application rates must be reduced or the yields increased through appropriate changes in management practice.

C. SPECIAL CONDITIONS (continued)

23. Plant Available Nitrogen Procedure

a. The Plant Available Nitrogen (PAN) method predicts the typical amount of nitrogen that is expected to be available to plants based on the median or average values from the reference publications listed herein. Actual nitrogen available to plants during a growing season may be more or less than the predicted values due to climatic variations. Supplemental nitrogen applications during the growing season may be added to correct plant deficiencies. Wastewater, sludge and fertilizer nitrogen applications shall be based upon crop nitrogen requirements based on realistic crop yield goals. The wastewater application rate shall be calculated as follows:

PAN = CNR - SRN – CFN

WHERE: **CFN** = Commercial Fertilizer Nitrogen applied in pounds N/acre.
CNR = Crop Nitrogen Requirement in pounds N/acre
PAN = Plant Available Nitrogen in wastewater and sludges expressed as annual pounds N/acre.
SRN = Soil Residual Nitrogen in pounds N/acre.

b. Plant Available Nitrogen(PAN) is calculated as follows:

PAN = [Ammonia Nitrogen] x [Availability Factor]
+ [Organic Nitrogen] x [Availability Factor]
+ [Nitrate Nitrogen] x [Availability Factor]

For anaerobic treated wastewater and sludges, the nitrate nitrogen amounts will be negligible and can be ignored.

c. Plant Available Nitrogen (PAN) Availability factors for wastewater and sludges are as follows:

Type of Nitrogen	**Surface Application**	**Immediate Incorporation or Subsurface Injection**
Organic	0.25 - 0.75*	0.25 - 0.75*
Ammonia	0.6* *	0.9* *
Nitrate	0.9* *	0.9* *

***** Organic Nitrogen = [Total Kjeldahl Nitrogen as N] - [Ammonia as N].
Availability Factors based on time after application and waste type are:

Type of Manure by Animal Type and Waste Storage Method	Availability Factor by Time Period Year 1	Year 2	Year 3	Cumulative Year 3+
Anaerobic Lagoons (all animals/poultry)	0.35	0.18	0.09	0.62
Liquid storage basins (except poultry)	0.35	0.18	0.09	0.62
Poultry - storage basins and dry litter	0.60	0.10	0.05	0.75
Manure solids – beef, dairy, swine				
without bedding	0.35	0.18	0.09	0.62
with bedding	0.25	0.13	0.07	0.45

NOTES: Year 1 is the current year of manure application; year 2 is the previous year of manure application; and year 3 is manure application two years ago. Nitrogen availability for years 1, 2 and 3 must be added when manure is applied in consecutive years. The cumulative factor is used when manure is applied at about the same rate for 3 consecutive years or longer.

****** Average inorganic nitrogen availability based on the typical soil and climate conditions when considering additions due to precipitation, dry deposition, and foliar absorption versus losses due to volatilization and denitrification (10% denitrification loss is included). Permittee may choose to use this average value for all fields or may adjust the N availability based on site specific soil conditions using the table below. The approved factors for each field will be included in the O&M Manual.

C. SPECIAL CONDITIONS (continued)

23. Plant Available Nitrogen Procedure (continued)

Manure N denitrification estimates by Soil Drainage Classification					
Soil Organic Matter %	Excessively well drained	Well drained	Moderately well drained	Somewhat poorly drained	Poorly drained
% of inorganic N (manure., precip.) available					
< 2	92-96	82-94	72-92	60-88	40-80
2-5	82-94	68-92	60-88	50-80	10-70
> 5	76-92	60-88	50-80	30-70	0-50
Use the median values within each range. If other than median values are proposed, provide documentation by NRCS, professional agronomist, or certified nutrient management specialist. Adapted from USDA-NRCS, National Engineering Handbook, Part 651(AWMFH), Table 11-8.					

d. Soil Residual Nitrogen (SRN).

(1) For Annual Crops, the nitrogen availability from soil organic matter must be included based on soil CEC and crop season as follows:

SRN in pounds N/acre* = [percent organic mater] x Soil Availability Factor

Soil Availability Factor
by Soil CEC Ranges and Organic Matter

Growing Season	**Organic Matter**	**CEC <10**	**CEC 10-18**	**CEC >18**
Summer	1%	40*	20	10
Winter	1%	20*	10	5

***Note:** If CEC is less than 10 and organic matter is 1.5% or greater, the total SRN is constant at 60 pounds nitrogen for summer and 30 pounds for winter.

(2) For Perennial Crops the SRN is considered zero(0) for purposes of these calculations because the SRN has already been considered in the crop fertilization recommendations in the referenced publications.

e. Conversion Factors for laboratory testing results:
[mg/L or mg/kg or ppm] x [conversion factor] = [pounds per Unit Volume]

Unit Volume	Conversion Factors
lbs/acre inch	0.226
lbs/1,000 gallons	0.0083
lbs/100 cubic feet	0.0062
lbs/ton (wet wt)	0.002

f. Crop nitrogen requirements shall be based on University of Missouri publication, Soil Test Interpretations and Recommendations Handbook, as revised or one of the other reference publications listed in this permit. Alternate reference publications may be used only upon prior approval by the department and shall be listed in the approved O & M Manual.

g. If a crop is not harvested, the PAN rate shall not exceed 40 lbs/acre/year and grass vegetation must be maintained on the site.

h. PAN calculations for land used for grazing cattle shall include both manure additions by cattle and crop nitrogen consumed by the cattle based on actual cow days per acre/year. This permit does not authorize grazing of cattle where prohibited by state statute under Chapter 350 RSMo.

C. SPECIAL CONDITIONS (continued)

23. Plant Available Nitrogen Procedure (continued)

i. PAN calculations, application amounts, crop yields and crop removal rates shall be listed in the annual report.

j. Alternate nitrogen availability factors may be considered based upon site-specific conditions for each field and submittal of scientific justification. Alternate factors will be reviewed and approved by the department as part of the O & M Manual.

k. Supplemental nitrogen may be added to row crops when determined necessary for proper plant growth based on testing of plant vegetation or soil nitrate testing during the growing season. Procedures will be reviewed and approved by the department as part of the O & M Manual.

l. Primary reference publications used herein are:
(1) Livestock Waste Facilities Handbook, Midwest Plan Service, MWPS-18, April 1993.
(2) National Engineering Handbook, Part 651, Agricultural Waste Management Field Book, USDA, Natural Resources Conservation Service (NRCS), April 1992 and current supplements.
(3) Managing Nitrogen for Groundwater Quality and Farm Profitability, Soil Science Society of America, Inc., 1991.
(4) Soil Test Interpretations and Recommendations Handbook, University of Missouri, Department of Agronomy, December, 1992.
(5) Plant Available Nitrogen Procedure, Missouri Department of Natural Resources, Water Protection Program, April, 1998.

24. Operation and Maintenance Manual

The permittee shall develop, maintain and implement an O & M Manual that includes all necessary items to ensure the operation and integrity of the waste handling and land application systems. Copies of the O&M Manual and subsequent revisions shall be submitted to the department's Water Protection Program and Regional Office for review and approval. The O&M Manual shall include, but is not limited to, the following:

a. Detailed maps of the property showing all land application fields including the identification numbers for each field. The maps shall also indicate separation distances from streams, ponds, wells, and property lines and shall indicate areas of 0-10% slope, 10-20% slope, and over 20% slope. Indicate areas that are not suitable for land application. The maps shall also include the location of all buildings, pump stations, lagoons, containment structures, irrigation pipelines, irrigation riser connections, underground terrace outlets, composting areas, dead animal storage or disposal areas, domestic wastewater treatment systems and other waste handling units. The maps shall also depict all locations of classified streams, lakes and associated tributaries. The maps shall also indicate the location of all outfalls.
b. Start up procedures, field supervision during operation, and shutdown procedures of irrigation equipment.
c. Procedures for providing the separation distances required by this permit and as specified in 10 CSR 20-8.020 (15) (B).
d. Sample collection, preservation, and testing procedures.
e. Procedures for determining Plant Available Nitrogen (PAN) loading rates.
f. Record-keeping forms for tracking each field and storage structure. This shall include testing results, crops, yields, and application rates for each field.
g. A procedure for promptly reporting spills or discharges to the permittee plant manager and to the department.
h. A procedure for recording repair work on gravity sewer lines, recycle lines, and irrigation lines to include the reason for the repair work and the material used for the repair.
i. A program to eliminate debris and blockages of sewer lines and recycle lines and to keep debris out of the lagoons.

C. SPECIAL CONDITIONS (continued)

24. Operation and Maintenance Manual (continued)

j. A procedure for twice per day visual inspections of the complete waste collection, flushing and recycle system for overflows or other operational problems.
k. A program for routine, unannounced inspections of land application sites and records to ensure that all directives for land application from the permittee's central office are being followed. Records of the inspections shall be maintained by the permittee and made available to the department upon request.
l. A procedure to assure that all appropriate employees are properly trained in operation of the waste systems and are familiar with the O&M Manual.
m. Procedure for adjusting application periods and rates based on percent slope, soil infiltration capacity, soil moisture content, and percent of soil saturation capacity. Provide procedure for field verification of slopes on each application setting.
n. List of number, size, and capacity of waste removal, hauling and land application equipment.
o. Number of suitable days each year when land application will occur based on historical 1-in-10-year wettest precipitation and capacity of spreading equipment and personnel available.
p. Procedure to avoid application if there is a weather forecast for significant precipitation within 24 hours.
q. The O & M Manual shall contain an example lease agreement for land application. The permittee shall maintain a current list of leasees with addresses, telephone numbers and field numbers assigned available for department review upon request. Lease agreements shall be maintained for department review upon request. Lease agreements shall be reviewed annually in order to maintain 125% of land required for design flows. If land required for design flows falls below 125%, a plan shall be submitted to the department to decrease flows to match the land available or to implement other acceptable options discussing how to insure compliance with this permit.

25. Underground Tile Outlets at Land Application Sites
a. Any underground tile outlets from field terraces or subsurface field drainage tiles shall be shown on the site maps for all land application sites.
b. To prevent potential discharge of wastewater during irrigation of fields with underground tile outlets for terraced fields, the permittee shall either cap, plug, or otherwise prevent wastewater from entering the inlets at the fields during irrigation, provide a 150 foot grass buffer area between the inlets and wetted irrigation area, use subsurface injection type application equipment or install secondary containment structures below the tile outlets.
c. The O & M Manual shall include specific operating details for these fields to prevent discharge of wastewater during wastewater irrigation or leaching of nitrogen through the soils and into the tile drainage system.

26. Secondary Containment Structures
a. There may be containment structures or earthen dams installed and maintained down gradient of all confinement buildings and sewer lines, gravity outfall lines, recycle pump stations and recycle force mains in order to collect and retain wastewater discharges from spills or pipeline breaks. The containment structure should be able to collect a minimum volume equal to the maximum pumping capacity of the recycle pump for the wastewater flushing system in any 24-hour period. Collected wastewater shall be pumped into the lagoon or land applied so that there is no discharge.
b. Containment structures may also be located below underground tile outlets from irrigation sites or other areas not covered under paragraph a above of this special condition. Collected wastewater shall be pumped into a lagoon or land applied so that there is no discharge. Storm water may be released from the containment structure when the ammonia-N content is less than 2.5 mg/L. Subsequent storm water events may be released from the containment structure without sampling as long as no additional wastewater enters the containment structure.

C. SPECIAL CONDITIONS (continued)

27. Dead Animal Transfer Stations

There shall be no-discharge from dead animal collection areas or holding areas (dumpsters, holding tanks, stockpiles within livestock production buildings, refrigeration units, etc). The collection and holding areas shall be inspected at least once per day. Any liquid drainage or wash water shall be collected and placed into the animal waste lagoon or hauled off-site to a permitted treatment/disposal facility. There shall not be any discharge from the collection or holding areas to the soil surface or subsurface. Dead animals shall be collected and hauled off site for rendering or disposal in accordance with the Dead Animal Disposal Law under Chapter 269 RSMo.

28. Waste Characterization

The results of a waste characterization shall be submitted 180 days prior to the expiration date of this permit. The results will be used to determine if modifications for monitoring requirements or limitations are necessary prior to renewal of the permit. The results of a waste characterization shall also be submitted if changes in the operation will cause a significant increase of contaminants being land applied or contaminants not previously characterized being added to the operation. Similarly operated facilities may complete a waste characterization utilizing representative samples.